



**THT, Radial E-Cap., Enabled high ripple current by a reduction of impedance at high frequency range, high reliability withstanding to 10000 hours load life 105°C ,Long Lead, ROHS Conform, Packing Bulk-Ware into Polybag**

| Items                                                                           |                                                                                                   | Performance Characteristics |      |      |      |      |                                   |      |      |      |  |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------|------|------|------|------|-----------------------------------|------|------|------|--|
| Operating temperature range                                                     | -40°C +105°C                                                                                      |                             |      |      |      |      |                                   |      |      |      |  |
| Leakage current max.                                                            | I = 0,01CV + 3µA whichever is greater (after 2 minutes)                                           |                             |      |      |      |      |                                   |      |      |      |  |
|                                                                                 | I = 0,03CV + 4µA whichever is greater (after 1 minutes)                                           |                             |      |      |      |      |                                   |      |      |      |  |
|                                                                                 |                                                                                                   |                             |      |      |      |      |                                   |      |      |      |  |
| Capacitance tolerance                                                           | ±20% at 120Hz, 20°C                                                                               |                             |      |      |      |      |                                   |      |      |      |  |
| Dissipation factor max.<br>(at 120Hz, 20°C)                                     | Capacitance > 1000µF ; tanQ increases by 0,02 for each 1000µF from below value.                   |                             |      |      |      |      |                                   |      |      |      |  |
|                                                                                 | WV                                                                                                |                             | 6,3  | 10   | 16   | 25   | 35                                | 50   | 63   | 100  |  |
|                                                                                 | TanQ                                                                                              |                             | 0,22 | 0,19 | 0,16 | 0,14 | 0,12                              | 0,10 | 0,09 | 0,08 |  |
| Low temperature characteristics<br>(Impedance ratio at 120Jz)                   | Z-40°C / Z+20°C                                                                                   |                             |      |      |      |      | Z-25°C / Z+20°C                   |      |      |      |  |
|                                                                                 | 3                                                                                                 |                             |      |      |      |      | 2                                 |      |      |      |  |
|                                                                                 |                                                                                                   |                             |      |      |      |      |                                   |      |      |      |  |
| Load life ( after application of the<br>rated voltage for 10000hrs at<br>105°C) | Leakage Current                                                                                   |                             |      |      |      |      | Less than specified Value         |      |      |      |  |
|                                                                                 | Capacitance Change                                                                                |                             |      |      |      |      | Within ±25% off initial Value     |      |      |      |  |
|                                                                                 | TanQ                                                                                              |                             |      |      |      |      | Less than 200% of specified value |      |      |      |  |
|                                                                                 |                                                                                                   |                             |      |      |      |      |                                   |      |      |      |  |
|                                                                                 | ø5 , ø6,3 : 6000hours; ø8: 8000hours : ø10 : 10000hours                                           |                             |      |      |      |      |                                   |      |      |      |  |
| Shelf life (at 105°C)                                                           | After 1000 hours no load test, leakage current, capacitance and tanQ are same as load life value. |                             |      |      |      |      |                                   |      |      |      |  |

#### FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

| µF       | Frequency | 120Hz | 1kHz | 10kHz | 50kHz | 100kHz≤ |  |
|----------|-----------|-------|------|-------|-------|---------|--|
| ~33      |           | 0,42  | 0,70 | 0,90  | 0,95  | 1,00    |  |
| 39~270   |           | 0,50  | 0,73 | 0,92  | 0,96  | 1,00    |  |
| 330~680  |           | 0,55  | 0,77 | 0,94  | 0,97  | 1,00    |  |
| 820~1800 |           | 0,60  | 0,80 | 0,96  | 0,98  | 1,00    |  |
| 2200~    |           | 0,70  | 0,50 | 0,98  | 0,99  | 1,00    |  |

#### Technical Details

|                                   |                |        |      |
|-----------------------------------|----------------|--------|------|
| Range (µF)                        | 220            | ØD(mm) | 8,0  |
| Voltage                           | 16             | L(mm)  | 11,5 |
| Impedance (Ω)                     | 0,15           | F(mm)  | 3,5  |
| Ripple Current (mA)               | 760            | Ød(mm) | 0,5  |
| ESR (Ω) max.at 20°C 10KHz         | -.-            | α(mm)  | 1,5  |
| Lifetime (hrs)                    | 8000           | -.-    | -.-  |
| Operating- Temperature Range (°C) | -40°C ~ +105°C | -.-    | -.-  |



|    |     |     |     |     |      |     |     |  |
|----|-----|-----|-----|-----|------|-----|-----|--|
| ØD | 5   | 6,3 | 8   | 10  | 12,5 | 16  | 18  |  |
| F  | 2   | 2,5 | 3,5 | 5,0 | 5,0  | 7,5 | 7,5 |  |
| Ød | 0,5 |     |     | 0,6 |      | 0,8 |     |  |
| α  | 1,5 |     |     | 2.0 |      |     |     |  |

|       |       |      |        |        |        |       |            |
|-------|-------|------|--------|--------|--------|-------|------------|
| DRW:  | Lexua | CHKD | Wilson | MATL:  | ChuChu | DATE  | 23.12.2024 |
| APPD: | Jimmy |      |        | FINISH | Josy   | Sheet | 1 from 2   |

Copyright by S.Tiede



THT, Radial E-Cap., Enabled high ripple current by a reduction of impedance at high frequency range, high reliability withstanding to 10000 hours load life 105°C ,Long Lead, ROHS Conform, Packing Bulk-Ware into Polybag

### Ordering Informations:

| Serie-No. / Voltage / Range / Size | Capacity Tolerance | ROHS | Packing |
|------------------------------------|--------------------|------|---------|
|------------------------------------|--------------------|------|---------|

|                   |   |   |    |
|-------------------|---|---|----|
| I14059-1602210812 | M | R | BU |
|-------------------|---|---|----|

| Serie | Voltage (V) | Range $\mu$ H) | D * L (mm) | Tolerance Order Code | R= ROHS<br>N= NON ROHS | BU= Bulk-Ware Long Lead<br>T/B= Tape/Box<br>L3= Lead-Length 3~3,5mm |
|-------|-------------|----------------|------------|----------------------|------------------------|---------------------------------------------------------------------|
|-------|-------------|----------------|------------|----------------------|------------------------|---------------------------------------------------------------------|

### Soldering Information

#### Lead Solder Performance



#### Lead free Solder Performance



|       |       |      |        |        |        |       |            |
|-------|-------|------|--------|--------|--------|-------|------------|
| DRW:  | Lexua | CHKD | Wilson | MATL:  | ChuChu | DATE  | 23.12.2024 |
| APPD: | Jimmy |      |        | FINISH | Josy   | Sheet | 2 from 2   |